Fig. 1

NL1:

```
GGCTCCTCATCTGGAACACCTCGGGTCACCCCCGACAACGGTGGTGGGAGGGAGAGCGGC   60
CTCCTCCTCCCTGGTGGGGCCTGTCTGGGTGAAGCCCCTCTGTTCCCGAGGATCGTCCCA  120
ACCCCCAGCCGGGTGCTCCGAGCCATGGCCGACACCATCTTCGGCAGCGGGAATGATCAG  180
                        M  A  D  T  I  F  G  S  G  N  D  Q     12
TGGGTTTGCCCCAATGACCGGCAGCTTGCCCTTCGAGCCAAGCTGCAGACGGGCTGGTCC  240
 W  V  C  P  N  D  R  Q  L  A  L  R  A  K  L  Q  T  G  W  S     32
GTGCACACCTACCAGACGGAGAAGCAGAGGAGGAAGCAGCACCTCAGCCCGGCGGAGGTG  300
 V  H  T  Y  Q  T  E  K  Q  R  R  K  Q  H  L  S  P  A  E  V     52
GAGGCCATCCTGCAGGTCATCCAGAGGGCAGAGCGGCTCGACGTCCTGGAGCAGCAGAGA  360
 E  A  I  L  Q  V  I  Q  R  A  E  R  L  D  V  L  E  Q  Q  R     72
ATCGGGCGGCTGGTGGAGCGGCTGGAGACCATGAGGCGGAATGTGATGGGGAACGGCCTG  420
 I  G  R  L  V  E  R  L  E  T  M  R  R  N  V  M  G  N  G  L     92
TCCCAGTGTCTGCTCTGCGGGGAGGTGCTGGGCTTCCTGGGCAGCTCGTCGGTGTTCTGC  480
 S  Q  C  L  L  C  G  E  V  L  G  F  L  G  S  S  S  V  F  C    112
AAAGACTGCAGGAAGGTCTGGAAGAGGTCGGGGGCCTGGTTCTACAAAGGGCTCCCCAAG  540
 K  D  C  R  K  V  W  K  R  S  G  A  W  F  Y  K  G  L  P  K    132
TATATCTTGCCCCTGAAGACCCCTGGCCGAGCTGATGAGCCCCAGTTCCGACCTTGGCCC  600
 Y  I  L  P  L  K  T  P  G  R  A  D  E  P  Q  F  R  P  W  P    152
ACGGAACCGGCAGAGCGAGAGCCCAGAAGCTCTGAGACCAGCCGCATCTACACGTGGGCC  660
 T  E  P  A  E  R  E  P  R  S  S  E  T  S  R  I  Y  T  W  A    172
CGAGGAAGAGTGGTTTCCAGTGACAGTGACAGTGACTCGGATCTTAGCTCCTCCAGCCTA  720
 R  G  R  V  V  S  S  D  S  D  S  D  S  D  L  S  S  S  S  L    192
GAGGACAGACTCCCATCCACTGGGGTCAGGGACCGGAAAGGCGACAAACCCTGGAAGGAG  780
 E  D  R  L  P  S  T  G  V  R  D  R  K  G  D  K  P  W  K  E    212
TCAGGTGGCAGCGTGGAGGCCCCCAGGATGGGGTTCACCCAACCCGCGGGCCACCTCTTT  840
 S  G  G  S  V  E  A  P  R  M  G  F  T  Q  P  A  G  H  L  F    232
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GGGTTGCAGAGCAGCCTGGCCAGTGGTGAGACGGGCACAGGCTCTGCTGACCCGCCAGGG 900

G L Q S S L A S G E T G T G S A D P P G 252

GGAGGGACAGGCTCTGCTGACCCGCCAGGGGGACCCCGCCCCGGGCTGACCCGAAGGGCC 960

G G T G S A D P P G G P R P G L T R R A 272

CCGGTAAAAGACACACCTGGACGAGCCCCCGCTGCTGACGCAGCTCCAGCAGGCCCCTCC 1020

P V K D T P G R A P A A D A A P A G P S 292

AGCTGCCTGGGCTGAGGTGTCTGGTGCCTGGAACAGACTTCCCTGTGGAGGATTCCTGCC 1080

S C L G * 296

AGACCCTGCCCGGCTCCTCCCTGACCGGTCCTTGTGCCCTCACCAGACACCCTGTTGGCC 1140

ATGACTCAACAAACCAGTGTTGGGAGCCGTCTGCCTCCCCAGCTCAGTGCCTTTCTGCAC 1200

CCCTTCTCTCCTGGGGAGCTGTCTGCATCCGCCACCCCCTCCAACCACTGCCCTCAGCCC 1260

CCGACCTTATTTATTACCCTCCCCTCCCACACCCCCAATCTACCTGGTGATGATTTTAAG 1320

TTTGCGCGTGTCTTGGGTTGGGCTGGGGGGTTTCCCACATGCAGTGTCAGAGGGGCCGCC 1380

CGGTGGGGCTATCTCCGTTGCTATATTAATGGCAAGACTAAATGAAACCTAGGGCACGGC 1440

CTCCGAAGCTGCGTGTGGCCCCTTAGAGGTGAGCATCAGAGCCAGAGCAGTGAGGGGGAG 1500

ACTCACCCACCCTCTCCCTCTCCCTTCAGCTCTGGGAGGCAGGCGCAGTGCCCCCCTCCC 1560

ATGGGCTGGCCCAGGACCGCGGGTGAAACCTGGGTCTGTTTAGTTTCTTTGGTTTTTGTA 1620

TGTTTGTTTGTTTTTGACACAGTCTCGCTTTGTTGCCCAGGCTGGGGTGCAGTGGCACGA 1680

TCGCGGCTCACTGCAACCTCCACCTCCCGGGCTCAAGCGATTCTCTCACCTCAGCCTCCT 1740

GAGTAGGTGGGATTACAGATGCCCGCCACCACACCCAGTTAATTTTTGTATTTTTAGAAG 1800

AGATGGGGTTTCTCCATGTTGGCCAGGCTGGTCTTGAACTCCTGGTCTCAAGTGATCCGC 1860

CCGCCTCGGCCTCCCAAAGTGCTGGGATTACAGGTGTGAGCCACCGCACCCAATCCTATT 1920

AGGTTTCTTTGAATCCCCTCATGGCCTGCCTGGTTTTTGCTCAGCCTGTCTTCAGCTTGA 1980

GGAGCTGGGAAGCTCTGGTGGATGCTATGAACTCACTTGCTGAAGAGCAGCGTTCAGGTG 2040

CATCCCCAGCCAGGGCACGTGGCTCCCTCAGCCATGAATTCACTTCTCTTCAGGAGGTTT 2100

GGCTTGGCATGAAAATACTTCATTCAGAGTATGGGCAAATGCTTCTGGAAAACCCTTCCC 2160

TGAAGAGAGAGAACGTGTGTGTGTGTGTCGGTGATCACACCCTCCCATCCTTCCTGCCTC 2220

CTGCCCCAAACCCCGGGTTCCTGGGTCTGGAAGGGCCTTCTCTCCAAGCTGGGAGCTCCT 2280

GGGCCCCCACCATTCACTTTTTGTCCTTGCTGCTGGCAAACAGTAAAGAAACTCACTTTC 2340

CCTGTGGCACGTTATGCTTCAGAATTAAAACAATGAAGATTAAAA 2385

Fig. 2

CL1:

GGCTCCTCATCTGGAACACCTCGGGTCACCCCCGACAACGGTGGTGGGAGGGAGAGCGGC 60

CTCCTCCTCCCTGGTGGGGCCTGTCTGGGTGAAGCCCCTCTGTTCCCGAGGATCGTCCCA 120

ACCCCCAGCCGGGTGCTCCGAGCCATGGCCGACACCATCTTCGGCAGCGGGAATGATCAG 180

M A D T I F G S G N D Q 12

TGGGTTTGCCCCAATGACCGGCAGCTTGCCCTTCGAGCCAAGCTGCAGACGGGCTGGTCC 240

W V C P N D R Q L A L R A K L Q T G W S 32

GTGCACACCTACCAGACGGAGAAGCAGAGGAGGAAGCAGCACCTCAGCCCGGCGGAGGTG 300

V H T Y Q T E K Q R R K Q H L S P A E V 52

GAGGCCATCCTGCAGGTCATCCAGAGGGCAGAGCGGCTCGACGTCCTGGAGCAGCAGAGA 360

E A I L Q V I Q R A E R L D V L E Q Q R 72

ATCGGGCGGCTGGTGGAGCGGCTGGAGACCATGAGGCGGAATGTGATGGGGAACGGCCTG 420

I G R L V E R L E T M R R N V M G N G L 92

TCCCAGTGTCTGCTCTGCGGGGAGGTGCTGGGCTTCCTGGGCAGCTCGTCGGTGTTCTGC 480

S Q C L L C G E V L G F L G S S S V F C 112

AAAGACTGCAGGAAGAAAGTCTGCACCAAATGTGGGATCGAGGCCTCCCCTGGCCAGAAG 540

K D C R K K V C T K C G I E A S P G Q K 132

CGGCCCCTGTGGCTGTGTAAGATCTGCAGTGAGCAAAGAGAGGTCTGGAAGAGGTCGGGG 600

R P L W L C K I C S E Q R E V W K R S G 152

GCCTGGTTCTACAAAGGGCTCCCCAAGTATATCTTGCCCCTGAAGACCCCTGGCCGAGCT 660

A W F Y K G L P K Y I L P L K T P G R A 172

GATGACCCCCACTTCCGACCTTTGCCCACGGAACCGGCAGAGCGAGAGCCCAGAAGCTCT 720

D D P H F R P L P T E P A E R E P R S S 192

GAGACCAGCCGCATCTACACGTGGGCCCGAGGAAGAGTGGTTTCCAGTGACAGTGACAGT 780

E T S R I Y T W A R G R V V S S D S D S 212

GACTCGGATCTTAGCTCCTCCAGCCTAGAGGACAGACTCCCATCCACTGGGGTCAGGGAC 840

D S D L S S S S L E D R L P S T G V R D 232

CGGAAAGGCGACAAACCCTGGAAGGAGTCAGGTGGCAGCGTGGAGGCCCCCAGGATGGGG 900

R K G D K P W K E S G G S V E A P R M G 252

TTCACCCAACCCGCGGGCCACCTCTTTGGGTTGCAGAGCAGCCTGGCCAGTGGTGAGACG 960

F T Q P A G H L F G L Q S S L A S G E T 272

GGCACAGGCTCTGCTGACCCGCCAGGGGGAGGGACAGGCTCTGCTGACCCGCCAGGGGGA 1020

G T G S A D P P G G G T G S A D P P G G 292

CCCCGCCCCGGGCTGACCCGAAGGGCCCCGGTAAAAGACACACCTGGACGAGCCCCCGCT 1080

P R P G L T R R A P V K D T P G R A P A 312

GCTGACGCAGCTCCAGCAGGCCCCTCCAGCTGCCTGGGCTGAGGTGTCTGGTGCCTGGAA 1140

A D A A P A G P S S C L G * 325

CAGACTTCCCTGTGGAGGATTCCTGCCAGACCCTGCCCGGCTCCTCCCTGACCGGTCCTT 1200

GTGCCCTCACCAGACACCCTGTTGGCCATGACTCAACAAACCAGTGTTGGGAGCCGTCTG 1260

CCTCCCCAGCTCAGTGCCTTTCTGCACCCCTTCTCTCCTGGGGAGCTGTCTGCATCCGCC 1320

ACCCCCTCCAACCACTGCCCTCAGCCCCCGACCTTATTTATTACCCTCCCCTCCCACACC 1380

CCCAATCTACCTGGTGATGATTTTAAGTTTGCGCGTGTCTTGGGTTGGGCTGGGGGGTTT 1440

CCCACATGCAGTGTCAGAGGGGCCGCCCGGTGGGGCTATCTCCGTTGCTATATTAATGGC 1500

AAGACTAAATGAAACCTAGGGCACGGCCTCCGAAGCTGCGTGTGGCCCCTTAGAGGTGAG 1560

CATCAGAGCCAGAGCAGTGAGGGGGAGACTCACCCACCCTCTCCCTCTCCCTTCAGCTCT 1620

GGGAGGCAGGCGCAGTGCCCCCCTCCCATGGGCTGGCCCAGGACCGCGGGTGAAACCTGG 1680

GTCTGTTTAGTTTCTTTGGTTTTTGTATGTTTGTTTGTTTTTGACACAGTCTCGCTTTGT 1740

TGCCCAGGCTGGGGTGCAGTGGCACGATCGCGGCTCACTGCAACCTCCACCTCCCGGGCT 1800

CAAGCGATTCTCTCACCTCAGCCTCCTGAGTAGGTGGGATTACAGATGCCCGCCACCACA 1860

CCCAGTTAATTTTTGTATTTTTAGAAGAGATGGGGTTTCTCCATGTTGGCCAGGCTGGTC 1920

TTGAACTCCTGGTCTCAAGTGATCCGCCCGCCTCGGCCTCCCAAAGTGCTGGGATTACAG 1980

GTGTGAGCCACCGCACCCAATCCTATTAGGTTTCTTTGAATCCCCTCATGGCCTGCCTGG 2040

TTTTTGCTCAGCCTGTCTTCAGCTTGAGGAGCTGGGAAGCTCTGGTGGATGCTATGAACT 2100

CACTTGCTGAAGAGCAGCGTTCAGGTGCATCCCCAGCCAGGGCACGTGGCTCCCTCAGCC 2160

ATGAATTCACTTCTCTTCAGGAGGTTTGGCTTGGCATGAAAATACTTCATTCAGAGTATG 2220

GGCAAATGCTTCTGGAAAACCCTTCCCTGAAGAGAGAGAACGTGTGTGTGTGTGTCGGTG 2280

ATCACACCCTCCCATCCTTCCTGCCTCCTGCCCCAAACCCCGGGTTCCTGGGTCTGGAAG 2340

GGCCTTCTCTCCAAGCTGGGAGCTCCTGGGCCCCCACCATTCACTTTTTGTCCTTGCTGC 2400

TGGCAAACAGTAAAGAAACTCACTTTCCCTGTGGCACGTTATGCTTCAGAATTAAAACAA 2460

TGAAGATTAAAA 2472

Fig.3

CL2:

GGCTCCTCATCTGGAACACCTCGGGTCACCCCCGACAACGGTGGTGGGAGGGAGAGCGGC 60

CTCCTCCTCCCTGGTGGGGCCTGTCTGGGTGAAGCCCCTCTGTTCCCGAGGATCGTCCCA 120

ACCCCCAGCCGGGTGCTCCGAGCCATGGCCGACACCATCTTCGGCAGCGGGAATGATCAG 180

TGGGTTTGCCCCAATGACCGGCAGCTTGCCCTTCGAGCCAAGCACTGACTGCACAGCAGT 240

GAACAGGACCAACACAGTCCCTGGTCTTAAAGCACAGGTGGGCAGAGGCTGCAGACGGGC 300

TGGTCGGTGCACACCTACCAGACGGAGAAGCAGAGGAGGAAGCAGCACCTCAGCCCGGCG 360

GAGGTGGAGGCCATCCTGCAGGTCATCCAGAGGGCAGAGCGGCTCGACGTCCTGGAGCAG 420

CAGAGAATCGGGCGGCTGGTGGAGCGGCTGGAGACCATGAGGCGGAATGTGATGGGGAAC 480

M R R N V M G N 8

GGCCTGTCCCAGTGTCTGCTCTGCGGGGAGGTGCTGGGCTTCCTGGGCAGCTCGTCGGTG 540

G L S Q C L L C G E V L G F L G S S S V 28

TTCTGCAAAGACTGCAGGAAGAAAGTCTGCACCAAATGTGGGATCGAGGCCTCCCCTGGC 600

F C K D C R K K V C T K C G I E A S P G 48

CAGAAGCGGCCCCTGTGGCTGTGTAAGATCTGCAGTGAGCAAAGAGAGGTCTGGAAGAGG 660

Q K R P L W L C K I C S E Q R E V W K R 68

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TCGGGGGCCTGGTTCTACAAAGGGCTCCCCAAGTATATCTTGCCCCTGAAGACCCCTGGC   720
 S  G  A  W  F  Y  K  G  L  P  K  Y  I  L  P  L  K  T  P  G    88
CGAGCTGATGACCCCCACTTCCGACCTTTGCCCACGGAACCGGCAGAGCGAGAGCCCAGA   780
 R  A  D  D  P  H  F  R  P  L  P  T  E  P  A  E  R  E  P  R   108
AGCTCTGAGACCAGCCGCATCTACACGTGGGCCCGAGGAAGAGTGGTTTCCAGTGACAGT   840
 S  S  E  T  S  R  I  Y  T  W  A  R  G  R  V  V  S  S  D  S   128
GACAGTGACTCGGATCTTAGCTCCTCCAGCCTAGAGGACAGACTCCCATCCACTGGGGTC   900
 D  S  D  S  D  L  S  S  S  S  L  E  D  R  L  P  S  T  G  V   148
AGGGACCGGAAAGGCGACAAACCCTGGAAGGAGTCAGGTGGCAGCGTGGAGGCCCCCAGG   960
 R  D  R  K  G  D  K  P  W  K  E  S  G  G  S  V  E  A  P  R   168
ATGGGGTTCACCCAACCCGCGGGCCACCTCTTTGGGTTGCAGAGCAGCCTGGCCAGTGGT  1020
 M  G  F  T  Q  P  A  G  H  L  F  G  L  Q  S  S  L  A  S  G   188
GAGACGGGCACAGGCTCTGCTGACCCGCCAGGGGGAGGGACAGGCTCTGCTGACCCGCCA  1080
 E  T  G  T  G  S  A  D  P  P  G  G  G  T  G  S  A  D  P  P   208
GGGGGACCCCGCCCCGGGCTGACCCGAAGGGCCCCGGTAAAAGACACACCTGGACGAGCC  1140
 G  G  P  R  P  G  L  T  R  R  A  P  V  K  D  T  P  G  R  A   228
CCCGCTGCTGACGCAGCTCCAGCAGGCCCCTCCAGCTGCCTGGGCTGAGGTGTCTGGTGC  1200
 P  A  A  D  A  A  P  A  G  P  S  S  C  L  G  *               243
CTGGAACAGACTTCCCTGTGGAGGATTCCTGCCAGACCCTGCCCGGCTCCTCCCTGACCG  1260
GTCCTTGTGCCCTCACCAGACACCCTGTTGGCCATGACTCAACAAACCAGTGTTGGGAGC  1320
CGTCTGCCTCCCCAGCTCAGTGCCTTTCTGCACCCCTTCTCTCCTGGGGAGCTGTCTGCA  1380
TCCGCCACCCCCTCCAACCACTGCCCTCAGCCCCCGACCTTATTTATTACCCTCCCCTCC  1440
CACACCCCCAATCTACCTGGTGATGATTTTAAGTTTGCGCGTGTCTTGGGTTGGGCTGGG  1500
GGGTTTCCCACATGCAGTGTCAGAGGGGCCGCCCGGTGGGGCTATCTCCGTTGCTATATT  1560
AATGGCAAGACTAAATGAAACCTAGGGCACGGCCTCCGAAGCTGCGTGTGGCCCCTTAGA  1620
GGTGAGCATCAGAGCCAGAGCAGTGAGGGGGAGACTCACCCACCCTCTCCCTCTCCCTTC  1680
AGCTCTGGGAGGCAGGCGCAGTGCCCCCCTCCCATGGGCTGGCCCAGGACCGCGGGTGAA  1740
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ACCTGGGTCTGTTTAGTTTCTTTGGTTTTTGTATGTTTGTTTGTTTTTGACACAGTCTCG  1800
CTTTGTTGCCCAGGCTGGGGTGCAGTGGCACGATCGCGGCTCACTGCAACCTCCACCTCC  1860
CGGGCTCAAGCGATTCTCTCACCTCAGCCTCCTGAGTAGGTGGGATTACAGATGCCCGCC  1920
ACCACACCCAGTTAATTTTTGTATTTTTAGAAGAGATGGGGTTTCTCCATGTTGGCCAGG  1980
CTGGTCTTGAACTCCTGGTCTCAAGTGATCCGCCCGCCTCGGCCTCCCAAAGTGCTGGGA  2040
TTACAGGTGTGAGCCACCGCACCCAATCCTATTAGGTTTCTTTGAATCCCCTCATGGCCT  2100
GCCTGGTTTTTGCTCAGCCTGTCTTCAGCTTGAGGAGCTGGGAAGCTCTGGTGGATGCTA  2160
TGAACTCACTTGCTGAAGAGCAGCGTTCAGGTGCATCCCCAGCCAGGGCACGTGGCTCCC  2220
TCAGCCATGAATTCACTTCTCTTCAGGAGGTTTGGCTTGGCATGAAAATACTTCATTCAG  2280
AGTATGGGCAAATGCTTCTGGAAAACCCTTCCCTGAAGAGAGAGAACGTGTGTGTGTGTG  2340
TCGGTGATCACACCCTCCCATCCTTCCTGCCTCCTGCCCCAAACCCCGGGTTCCTGGGTC  2400
TGGAAGGGCCTTCTCTCCAAGCTGGGAGCTCCTGGGCCCCCACCATTCACTTTTTGTCCT  2460
TGCTGCTGGCAAACAGTAAAGAAACTCACTTTCCCTGTGGCACGTTATGCTTCAGAATTA  2520
AAACAATGAAGATTAAAA                                             2538
```

Fig. 4

CL3:

```
GGCTCCTCATCTGGAACACCTCGGGTCACCCCCGACAACGGTGGTGGGAGGGAGAGCGGC    60
CTCCTCCTCCCTGGTGGGGCCTGTCTGGGTGAAGCCCCTCTGTTCCCGAGGATCGTCCCA   120
ACCCCCAGCCGGGTGCTCCGAGCCATGGCCGACACCATCTTCGGCAGCGGGAATGATCAG   180
                          M  A  D  T  I  F  G  S  G  N  D  Q     12
TGGGTTTGCCCCAATGACCGGCAGCTTGCCCTTCGAGCCAAGCTGCAGACGGGCTGGTCC   240
 W  V  C  P  N  D  R  Q  L  A  L  R  A  K  L  Q  T  G  W  S    32
GTGCACACCTACCAGACGGAGAAGCAGAGGAGGAAGCAGCACCTCAGCCCGGCGGAGGTG   300
 V  H  T  Y  Q  T  E  K  Q  R  R  K  Q  H  L  S  P  A  E  V    52
GAGGCCATCCTGCAGGTCATCCAGAGGGCAGAGCGGCTCGACGTCCTGGAGCAGCAGAGA   360
 E  A  I  L  Q  V  I  Q  R  A  E  R  L  D  V  L  E  Q  Q  R    72
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ATCGGGCGGCTGGTGGAGCGGCTGGAGACCATGAGGCGGAATGTGATGGGGAACGGCCTG 420

I G R L V E R L E T M R R N V M G N G L 92

TCCCAGTGTCTGCTCTGCGGGGAGGTGCTGGGCTTCCTGGGCAGCTCGTCGGTGTTCTGC 480

S Q C L L C G E V L G F L G S S S V F C 112

AAAGACTGCAGGAAGAAAGTCTGCACCAAATGTGGGATCGAGGCCTCCCCTGGCCAGAAG 540

K D C R K K V C T K C G I E A S P G Q K 132

CGGCCCCTGTGGCTGTGTAAGATCTGCAGTGAGCAAAGAGAGGTCTGGAAGAGGTCGGGG 600

R P L W L C K I C S E Q R E V W K R S G 152

GCCTGGTTCTACAAAGGGCTCCCCAAGTATATCTTGCCCCTGAAGACCCCTGGCCGAGCT 660

A W F Y K G L P K Y I L P L K T P G R A 172

GATGACCCCCACTTCCGACCTTTGCCCACGGAACCGGCAGAGCGAGAGCCCAGAAGCTCT 720

D D P H F R P L P T E P A E R E P R S S 192

GAGACCAGCCGCATCTACACGTGGGCCCGAGGAAGAGTCGTAGGAAGAAAGTGCTGATCC 780

E T S R I Y T W A R G R V V G R K C * 210

ACGCTGCAGCCTGGATGAGTCCTTGAAAACACCATGCGAAGTGGAAGAAGCCGGAGACGA 840

AAGGCCGCGTGTTGTGTGATCTCATCTATATGAGCAGTGGTTTCCAGTGACAGTGACAGT 900

GACTCGGATCTTAGCTCCTCCAGCCTAGAGGACAGACTCCCATCCACTGGGGTCAGGGAC 960

CGGAAAGGCGACAAACCCTGGAAGGAGTCAGGTGGCAGCGTGGAGGCCCCCAGGATGGGG 1020

TTCACCCAACCCGCGGGCCACCTCTTTGGGTTGCAGAGCAGCCTGGCCAGTGGTGAGACG 1080

GGCACAGGCTCTGCTGACCCGCCAGGGGGAGGGACAGGCTCTGCTGACCCGCCAGGGGGA 1140

CCCCGCCCCGGGCTGACCCGAAGGGCCCCGGTAAAAGACACACCTGGACGAGCCCCCGCT 1200

GCTGACGCAGCTCCAGCAGGCCCCTCCAGCTGCCTGGGCTGAGGTGTCTGGTGCCTGGAA 1260

CAGACTTCCCTGTGGAGGATTCCTGCCAGACCCTGCCCGGCTCCTCCCTGACCGGTCCTT 1320

GTGCCCTCACCAGACACCCTGTTGGCCATGACTCAACAAACCAGTGTTGGGAGCCGTCTG 1380

CCTCCCCAGCTCAGTGCCTTTCTGCACCCCTTCTCTCCTGGGGAGCTGTCTGCATCCGCC 1440

ACCCCCTCCAACCACTGCCCTCAGCCCCCGACCTTATTTATTACCCTCCCCTCCCACACC 1500

CCCAATCTACCTGGTGATGATTTTAAGTTTGCGCGTGTCTTGGGTTGGGCTGGGGGGTTT 1560

CCCACATGCAGTGTCAGAGGGGCCGCCCGGTGGGGCTATCTCCGTTGCTATATTAATGGC 1620

AAGACTAAATGAAACCTAGGGCACGGCCTCCGAAGCTGCGTGTGGCCCCTTAGAGGTGAG 1680

CATCAGAGCCAGAGCAGTGAGGGGGAGACTCACCCACCCTCTCCCTCTCCCTTCAGCTCT 1740

GGGAGGCAGGCGCAGTGCCCCCCTCCCATGGGCTGGCCCAGGACCGCGGGTGAAACCTGG 1800

GTCTGTTTAGTTTCTTTGGTTTTTGTATGTTTGTTTGTTTTTGACACAGTCTCGCTTTGT 1860

TGCCCAGGCTGGGGTGCAGTGGCACGATCGCGGCTCACTGCAACCTCCACCTCCCGGGCT 1920

CAAGCGATTCTCTCACCTCAGCCTCCTGAGTAGGTGGGATTACAGATGCCCGCCACCACA 1980

CCCAGTTAATTTTTGTATTTTTAGAAGAGATGGGGTTTCTCCATGTTGGCCAGGCTGGTC 2040

TTGAACTCCTGGTCTCAAGTGATCCGCCCGCCTCGGCCTCCCAAAGTGCTGGGATTACAG 2100

GTGTGAGCCACCGCACCCAATCCTATTAGGTTTCTTTGAATCCCCTCATGGCCTGCCTGG 2160

TTTTTGCTCAGCCTGTCTTCAGCTTGAGGAGCTGGGAAGCTCTGGTGGATGCTATGAACT 2220

CACTTGCTGAAGAGCAGCGTTCAGGTGCATCCCCAGCCAGGGCACGTGGCTCCCTCAGCC 2280

ATGAATTCACTTCTCTTCAGGAGGTTTGGCTTGGCATGAAAATACTTCATTCAGAGTATG 2340

GGCAAATGCTTCTGGAAAACCCTTCCCTGAAGAGAGAGAACGTGTGTGTGTGTGTCGGTG 2400

ATCACACCCTCCCATCCTTCCTGCCTCCTGCCCCAAACCCCGGGTTCCTGGGTCTGGAAG 2460

GGCCTTCTCTCCAAGCTGGGAGCTCCTGGGCCCCCACCATTCACTTTTTGTCCTTGCTGC 2520

TGGCAAACAGTAAAGAAACTCACTTTCCCTGTGGCACGTTATGCTTCAGAATTAAAACAA 2580

TGAAGATTAAAA 2592

Fig.5

CL4:

GGCTCCTCATCTGGAACACCTCGGGTCACCCCCGACAACGGTGGTGGGAGGGAGAGCGGC 60

CTCCTCCTCCCTGGTGGGGCCTGTCTGGGTGAAGCCCCTCTGTTCCCGAGGATCGTCCCA 120

ACCCCCAGCCGGGTGCTCCGAGCCATGGCCGACACCATCTTCGGCAGCGGGAATGATCAG 180

TGGGTTTGCCCCAATGACCGGCAGCTTGCCCTTCGAGCCAAGCACTGACTGCACAGCAGT 240

GAACAGGACCAACACAGTCCCTGGTCTTAAAGCACAGGTGGGCAGAGGCTGCAGACGGGC 300

TGGTCCGTGCACACCTACCAGACGGAGAAGCAGAGGAGGAAGCAGCACCTCAGCCCGGCG 360

GAGGTGGAGGCCATCCTGCAGGTCATCCAGAGGGCAGAGCGGCTCGACGTCCTGGAGCAG 420

CAGAGAATCGGGCGGCTGGTGGAGCGGCTGGAGACCATGAGGCGGAATGTGATGGGGAAC 480

M R R N V M G N 8

GGCCTGTCCCAGTGTCTGCTCTGCGGGGAGGTGCTGGGCTTCCTGGGCAGCTCGTCGGTG 540

G L S Q C L L C G E V L G F L G S S S V 28

TTCTGCAAAGACTGCAGGAAGAAAGTCTGCACCAAATGTGGGATCGAGGCCTCCCCTGGC 600

F C K D C R K K V C T K C G I E A S P G 48

CAGAAGCGGCCCCTGTGGCTGTGTAAGATCTGCAGTGAGCAAAGAGAGGTCTGGAAGAGG 660

Q K R P L W L C K I C S E Q R E V W K R 68

TCGGGGGCCTGGTTCTACAAAGGGCTCCCCAAGTATATCTTGCCCCTGAAGACCCCTGGC 720

S G A W F Y K G L P K Y I L P L K T P G 88

CGAGCTGATGACCCCCACTTCCGACCTTTGCCCACGGAACCGGCAGAGCGAGAGCCCAGA 780

R A D D P H F R P L P T E P A E R E P R 108

AGCTCTGAGACCAGCCGCATCTACACGTGGGCCCGAGGAAGAGTCGTAGGAAGAAAGTGC 840

S S E T S R I Y T W A R G R V V G R K C 128

TGATCCACGCTGCAGCCTGGATGAGTCCTTGAAAACACCATGCGAAGTGGAAGAAGCCGG 900

AGACGAAAGGCCGCGTGTTGTGTGATCTCATCTATATGAGCAGTGGTTTCCAGTGACAGT 960

GACAGTGACTCGGATCTTAGCTCCTCCAGCCTAGAGGACAGACTCCCATCCACTGGGGTC 1020

AGGGACCGGAAAGGCGACAAACCCTGGAAGGAGTCAGGTGGCAGCGTGGAGGCCCCCAGG 1080

ATGGGGTTCACCCAACCCGCGGGCCACCTCTTTGGGTTGCAGAGCAGCCTGGCCAGTGGT 1140

GAGACGGGCACAGGCTCTGCTGACCCGCCAGGGGGGGGGACAGGCTCTGCTGACCCGCCA 1200

GGGGGACCCCGCCCCGGGCTGACCCGAAGGGCCCCGGTAAAAGACACACCTGGACGAGCC 1260

CCCGCTGCTGACGCAGCTCCAGCAGGCCCCTCCAGCTGCCTGGGCTGAGGTGTCTGGTGC 1320

CTGGAACAGACTTCCCTGTGGAGGATTCCTGCCAGACCCTGCCCGGCTCCTCCCTGACCG 1380

GTCCTTGTGCCCTCACCAGACACCCTGTTGGCCATGACTCAACAAACCAGTGTTGGGAGC 1440

CGTCTGCCTCCCCAGCTCAGTGCCTTTCTGCACCCCTTCTCTCCTGGGGAGCTGTCTGCA 1500

TCCGCCACCCCCTCCAACCACTGCCCTCAGCCCCCGACCTTATTTATTACCCTCCCCTCC 1560

CACACCCCCAATCTACCTGGTGATGATTTTAAGTTTGCGCGTGTCTTGGGTTGGGCTGGG 1620

GGGTTTCCCACATGCAGTGTCAGAGGGGCCGCCCGGTGGGGCTATCTCCGTTGCTATATT 1680

AATGGCAAGACTAAATGAAACCTAGGGCACGGCCTCCGAAGCTGCGTGTGGCCCCTTAGA 1740

GGTGAGCATCAGAGCCAGAGCAGTGAGGGGGAGACTCACCCACCCTCTCCCTCTCCCTTC 1800

AGCTCTGGGAGGCAGGCGCAGTGCCCCCCTCCCATGGGCTGGCCCAGGACCGCGGGTGAA 1860

ACCTGGGTCTGTTTAGTTTCTTTGGTTTTTGTATGTTTGTTTGTTTTTGACACAGTCTCG 1920

CTTTGTTGCCCAGGCTGGGGTGCAGTGGCACGATCGCGGCTCACTGCAACCTCCACCTCC 1980

CGGGCTCAAGCGATTCTCTCACCTCAGCCTCCTGAGTAGGTGGGATTACAGATGCCCGCC 2040

ACCACACCCAGTTAATTTTTGTATTTTTAGAAGAGATGGGGTTTCTCCATGTTGGCCAGG 2100

CTGGTCTTGAACTCCTGGTCTCAAGTGATCCGCCCGCCTCGGCCTCCCAAAGTGCTGGGA 2160

TTACAGGTGTGAGCCACCGCACCCAATCCTATTAGGTTTCTTTGAATCCCCTCATGGCCT 2220

GCCTGGTTTTTGCTCAGCCTGTCTTCAGCTTGAGGAGCTGGGAAGCTCTGGTGGATGCTA 2280

TGAACTCACTTGCTGAAGAGCAGCGTTCAGGTGCATCCCCAGCCAGGGCACGTGGCTCCC 2340

TCAGCCATGAATTCACTTCTCTTCAGGAGGTTTGGCTTGGCATGAAAATACTTCATTCAG 2400

AGTATGGGCAAATGCTTCTGGAAAACCCTTCCCTGAAGAGAGAGAACGTGTGTGTGTGTG 2460

TCGGTGATCACACCCTCCCATCCTTCCTGCCTCCTGCCCCAAACCCCGGGTTCCTGGGTC 2520

TGGAAGGGCCTTCTCTCCAAGCTGGGAGCTCCTGGGCCCCCACCATTCACTTTTTGTCCT 2580

TGCTGCTGGCAAACAGTAAAGAAACTCACTTTCCCTGTGGCACGTTATGCTTCAGAATTA 2640

AAACAATGAAGATTAAAA 2658

Fig. 6

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      1              15 16          30 31          45 46          60 61          75 76          90
1 NOC2 --------------- --------------- --------------- --------------- --------------- ---------- 0
2 NL1  GGCTCCTCATCTGGA ACACCTCGGGTCACC CCCGACAACGGTGGT GGGAGGGAGAGCGGC CTCCTCCTCCCTGGT GGGGCCTGTCTGGGT 90
3 LC1  GGCTCCTCATCTGGA ACACCTCGGGTCACC CCCGACAACGGTGGT GGGAGGGAGAGCGGC CTCCTCCTCCCTGGT GGGGCCTGTCTGGGT 90
4 LC2  GGCTCCTCATCTGGA ACACCTCGGGTCACC CCCGACAACGGTGGT GGGAGGGAGAGCGGC CTCCTCCTCCCTGGT GGGGCCTGTCTGGGT 90
5 LC3  GGCTCCTCATCTGGA ACACCTCGGGTCACC CCCGACAACGGTGGT GGGAGGGAGAGCGGC CTCCTCCTCCCTGGT GGGGCCTGTCTGGGT 90
6 LC4  GGCTCCTCATCTGGA ACACCTCGGGTCACC CCCGACAACGGTGGT GGGAGGGAGAGCGGC CTCCTCCTCCCTGGT GGGGCCTGTCTGGGT 90

      91          105  106         120 121         135 136         150 151         165 166         180
1 NOC2 --------------- ----------TCCCA ACCCCCAGCCGGGTG CTCCGAGCCATGGCC GACACCATCTTCGGC AGCGGGAATGATCAG 65
2 NL1  GAAGCCCCTCTGTTC CCGAGGATCGTCCCA ACCCCCAGCCGGGTG CTCCGAGCCATGGCC GACACCATCTTCGGC AGCGGGAATGATCAG 180
3 LC1  GAAGCCCCTCTGTTC CCGAGGATCGTCCCA ACCCCCAGCCGGGTG CTCCGAGCCATGGCC GACACCATCTTCGGC AGCGGGAATGATCAG 180
4 LC2  GAAGCCCCTCTGTTC CCGAGGATCGTCCCA ACCCCCAGCCGGGTG CTCCGAGCCATGGCC GACACCATCTTCGGC AGCGGGAATGATCAG 180
5 LC3  GAAGCCCCTCTGTTC CCGAGGATCGTCCCA ACCCCCAGCCGGGTG CTCCGAGCCATGGCC GACACCATCTTCGGC AGCGGGAATGATCAG 180
6 LC4  GAAGCCCCTCTGTTC CCGAGGATCGTCCCA ACCCCCAGCCGGGTG CTCCGAGCCATGGCC GACACCATCTTCGGC AGCGGGAATGATCAG 180
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         181            195 196        210 211        225 226        240 241        255 256        270
1 NOC2  TGGGTTTGCCCCAAT GACCGGCAGCTTGCC CTTCGAGCCAAGC-- --------------- --------------- ---------------  108
2 NL1   TGGGTTTGCCCCAAT GACCGGCAGCTTGCC CTTCGAGCCAAGC-- --------------- --------------- ---------------  223
3 LC1   TGGGTTTGCCCCAAT GACCGGCAGCTTGCC CTTCGAGCCAAGC-- --------------- --------------- ---------------  223
4 LC2   TGGGTTTGCCCCAAT GACCGGCAGCTTGCC CTTCGAGCCAAGCAC TGACTGCACAGCAGT GAACAGGACCAACAC AGTCCCTGGTCTTAA  270
5 LC3   TGGGTTTGCCCCAAT GACCGGCAGCTTGCC CTTCGAGCCAAGC-- --------------- --------------- ---------------  223
6 LC4   TGGGTTTGCCCCAAT GACCGGCAGCTTGCC CTTCGAGCCAAGCAC TGACTGCACAGCAGT GAACAGGACCAACAC AGTCCCTGGTCTTAA  270

         271            285 286        300 301        315 316        330 331        345 346        360
1 NOC2  --------------- ----TGCAGACGGGC TGGTCCGTGCACACC TACCAGACGGAGAAG CAGAGGAGGAAGCAG CACCTCAGCCCGGCG  179
2 NL1   --------------- ----TGCAGACGGGC TGGTCCGTGCACACC TACCAGACGGAGAAG CAGAGGAGGAAGCAG CACCTCAGCCCGGCG  294
3 LC1   --------------- ----TGCAGACGGGC TGGTCCGTGCACACC TACCAGACGGAGAAG CAGAGGAGGAAGCAG CACCTCAGCCCGGCG  294
4 LC2   AGCACAGGTGGGCAG AGGCTGCAGACGGGC TGGTCGGTGCACACC TACCAGACGGAGAAG CAGAGGAGGAAGCAG CACCTCAGCCCGGCG  360
5 LC3   --------------- ----TGCAGACGGGC TGGTCCGTGCACACC TACCAGACGGAGAAG CAGAGGAGGAAGCAG CACCTCAGCCCGGCG  294
6 LC4   AGCACAGGTGGGCAG AGGCTGCAGACGGGC TGGTCCGTGCACACC TACCAGACGGAGAAG CAGAGGAGGAAGCAG CACCTCAGCCCGGCG  360

         361            375 376        390 391        405 406        420 421        435 436        450
1 NOC2  GAGGTGGAGGCCATC CTGCAGGTCATCCAG AGGGCAGAGCGGCTC GACGTCCTGGAGCAG CAGAGAATCGGGCGG CTGGTGGAGCGGCTG  269
2 NL1   GAGGTGGAGGCCATC CTGCAGGTCATCCAG AGGGCAGAGCGGCTC GACGTCCTGGAGCAG CAGAGAATCGGGCGG CTGGTGGAGCGGCTG  384
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3 LC1  GAGGTGGAGGCCATC CTGCAGGTCATCCAG AGGGCAGAGCGGCTC GACGTCCTGGAGCAG CAGAGAATCGGGCGG CTGGTGGAGCGGCTG    384
4 LC2  GAGGTGGAGGCCATC CTGCAGGTCATCCAG AGGGCAGAGCGGCTC GACGTCCTGGAGCAG CAGAGAATCGGGCGG CTGGTGGAGCGGCTG    450
5 LC3  GAGGTGGAGGCCATC CTGCAGGTCATCCAG AGGGCAGAGCGGCTC GACGTCCTGGAGCAG CAGAGAATCGGGCGG CTGGTGGAGCGGCTG    384
6 LC4  GAGGTGGAGGCCATC CTGCAGGTCATCCAG AGGGCAGAGCGGCTC GACGTCCTGGAGCAG CAGAGAATCGGGCGG CTGGTGGAGCGGCTG    450

       451          465 466          480 481          495 496          510 511          525 526          540

1 NOC2 GAGACCATGAGGCGG AATGTGATGGGGAAC GGCCTGTCCCAGTGT CTGCTCTGCGGGGAG GTGCTGGGCTTCCTG GGCAGCTCGTCGGTG    359
2 NL1  GAGACCATGAGGCGG AATGTGATGGGGAAC GGCCTGTCCCAGTGT CTGCTCTGCGGGGAG GTGCTGGGCTTCCTG GGCAGCTCGTCGGTG    474
3 LC1  GAGACCATGAGGCGG AATGTGATGGGGAAC GGCCTGTCCCAGTGT CTGCTCTGCGGGGAG GTGCTGGGCTTCCTG GGCAGCTCGTCGGTG    474
4 LC2  GAGACCATGAGGCGG AATGTGATGGGGAAC GGCCTGTCCCAGTGT CTGCTCTGCGGGGAG GTGCTGGGCTTCCTG GGCAGCTCGTCGGTG    540
5 LC3  GAGACCATGAGGCGG AATGTGATGGGGAAC GGCCTGTCCCAGTGT CTGCTCTGCGGGGAG GTGCTGGGCTTCCTG GGCAGCTCGTCGGTG    474
6 LC4  GAGACCATGAGGCGG AATGTGATGGGGAAC GGCCTGTCCCAGTGT CTGCTCTGCGGGGAG GTGCTGGGCTTCCTG GGCAGCTCGTCGGTG    540

       541          555 556          570 571          585 586          600 601          615 616          630

1 NOC2 TTCTGCAAAGACTGC AGGAAGAAAGTCTGC ACCAAATGTGGGATC GAGGCCTCCCCTGGC CAGAAGCGGCCCCTG TGGCTGTGTAAGATC    [illegible]9
2 NL1  TTCTGCAAAGACTGC AGGAAG--------- --------------- --------------- --------------- ---------------    495
3 LC1  TTCTGCAAAGACTGC AGGAAGAAAGTCTGC ACCAAATGTGGGATC GAGGCCTCCCCTGGC CAGAAGCGGCCCCTG TGGCTGTGTAAGATC    564
4 LC2  TTCTGCAAAGACTGC AGGAAGAAAGTCTGC ACCAAATGTGGGATC GAGGCCTCCCCTGGC CAGAAGCGGCCCCTG TGGCTGTGTAAGATC    630
5 LC3  TTCTGCAAAGACTGC AGGAAGAAAGTCTGC ACCAAATGTGGGATC GAGGCCTCCCCTGGC CAGAAGCGGCCCCTG TGGCTGTGTAAGATC    564
6 LC4  TTCTGCAAAGACTGC AGGAAGAAAGTCTGC ACCAAATGTGGGATC GAGGCCTCCCCTGGC CAGAAGCGGCCCCTG TGGCTGTGTAAGATC    630
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          631         645 646         660 661         675 676         690 691         705 706         720
1 NOC2 TGCAGTGAGCAAAGA GAGGTCTGGAAGAGG TCGGGGGCCTGGTTC TACAAAGGGCTCCCC AAGTATATCTTGCCC CTGAAGACCCCTGGC   539
2 NL1  --------------- ---GTCTGGAAGAGG TCGGGGGCCTGGTTC TACAAAGGGCTCCCC AAGTATATCTTGCCC CTGAAGACCCCTGGC   567
3 LC1  TGCAGTGAGCAAAGA GAGGTCTGGAAGAGG TCGGGGGCCTGGTTC TACAAAGGGCTCCCC AAGTATATCTTGCCC CTGAAGACCCCTGGC   654
4 LC2  TGCAGTGAGCAAAGA GAGGTCTGGAAGAGG TCGGGGGCCTGGTTC TACAAAGGGCTCCCC AAGTATATCTTGCCC CTGAAGACCCCTGGC   720
5 LC3  TGCAGTGAGCAAAGA GAGGTCTGGAAGAGG TCGGGGGCCTGGTTC TACAAAGGGCTCCCC AAGTATATCTTGCCC CTGAAGACCCCTGGC   [illegible]
6 LC4  TGCAGTGAGCAAAGA GAGGTCTGGAAGAGG TCGGGGGCCTGGTTC TACAAAGGGCTCCCC AAGTATATCTTGCCC CTGAAGACCCCTGGC   720

          721         735 736         750 751         765 766         780 781         795 796         810
1 NOC2 CGAGCTGATGACCCC CACTTCCGACCTTTG CCCACGGAACCGGCA GAGCGAGAGCCCAGA AGCTCTGAGACCAGC CGCATCTACACGTGG   629
2 NL1  CGAGCTGATGAGCCC CAGTTCCGACCTTGG CCCACGGAACCGGCA GAGCGAGAGCCCAGA AGCTCTGAGACCAGC CGCATCTACACGTGG   657
3 LC1  CGAGCTGATGACCCC CACTTCCGACCTTTG CCCACGGAACCGGCA GAGCGAGAGCCCAGA AGCTCTGAGACCAGC CGCATCTACACGTGG   744
4 LC2  CGAGCTGATGACCCC CACTTCCGACCTTTG CCCACGGAACCGGCA GAGCGAGAGCCCAGA AGCTCTGAGACCAGC CGCATCTACACGTGG   810
5 LC3  CGAGCTGATGACCCC CACTTCCGACCTTTG CCCACGGAACCGGCA GAGCGAGAGCCCAGA AGCTCTGAGACCAGC CGCATCTACACGTGG   744
6 LC4  CGAGCTGATGACCCC CACTTCCGACCTTTG CCCACGGAACCGGCA GAGCGAGAGCCCAGA AGCTCTGAGACCAGC CGCATCTACACGTGG   [illegible]

          811         825 826         840 841         855 856         870 871         885 886         900
1 NOC2 GCCCGAGGAAGAGT- --------------- --------------- --------------- --------------- ---------------   643
2 NL1  GCCCGAGGAAGAGT- --------------- --------------- --------------- --------------- ---------------   671
3 LC1  GCCCGAGGAAGAGT- --------------- --------------- --------------- --------------- ---------------   758
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4 LC2  GCCCGAGGAAGAGT- --------------- --------------- --------------- --------------- ---------------   824
5 LC3  GCCCGAGGAAGAGTC GTAGGAAGAAAGTGC TGATCCACGCTGCAG CCTGGATGAGTCCTT GAAAACACCATGCGA AGTGGAAGAAGCCGG   834
6 LC4  GCCCGAGGAAGAGTC GTAGGAAGAAAGTGC TGATCCACGCTGCAG CCTGGATGAGTCCTT GAAAACACCATGCGA AGTGGAAGAAGCCGG   900

       901          915 916          930 931          945 946          960 961          975 976          990
1 NOC2 --------------- --------------- --------------G GTTTCCAGTGACAGT GACAGTGACTCGGAT CTTAGCTCCTCCAGC   689
2 NL1  --------------- --------------- --------------G GTTTCCAGTGACAGT GACAGTGACTCGGAT CTTAGCTCCTCCAGC   717
3 LC1  --------------- --------------- --------------G GTTTCCAGTGACAGT GACAGTGACTCGGAT CTTAGCTCCTCCAGC   804
4 LC2  --------------- --------------- --------------G GTTTCCAGTGACAGT GACAGTGACTCGGAT CTTAGCTCCTCCAGC   870
5 LC3  AGACGAAAGGCCGCG TGTTGTGTGATCTCA TCTATATGAGCAGTG GTTTCCAGTGACAGT GACAGTGACTCGGAT CTTAGCTCCTCCAGC   924
6 LC4  AGACGAAAGGCCGCG TGTTGTGTGATCTCA TCTATATGAGCAGTG GTTTCCAGTGACAGT GACAGTGACTCGGAT CTTAGCTCCTCCAGC   990

       991          1005 1006        1020 1021        1035 1036        1050 1051        1065 1066        1080
1 NOC2 CTAGAGGACAGACTC CCATCCACTGGGGTC AGGGACCGGAAAGGC GACAAACCCTGGAAG GAGTCAGGTGGCAGC GTGGAGGCCCCCAGG   779
2 NL1  CTAGAGGACAGACTC CCATCCACTGGGGTC AGGGACCGGAAAGGC GACAAACCCTGGAAG GAGTCAGGTGGCAGC GTGGAGGCCCCCAGG   807
3 LC1  CTAGAGGACAGACTC CCATCCACTGGGGTC AGGGACCGGAAAGGC GACAAACCCTGGAAG GAGTCAGGTGGCAGC GTGGAGGCCCCCAGG   894
4 LC2  CTAGAGGACAGACTC CCATCCACTGGGGTC AGGGACCGGAAAGGC GACAAACCCTGGAAG GAGTCAGGTGGCAGC GTGGAGGCCCCCAGG   960
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5 LC3  CTAGAGGACAGACTC CCATCCACTGGGGTC AGGGACCGGAAAGGC GACAAACCCTGGAAG GAGTCAGGTGGCAGC GTGGAGGCCCCCAGG   1014
6 LC4  CTAGAGGACAGACTC CCATCCACTGGGGTC AGGGACCGGAAAGGC GACAAACCCTGGAAG GAGTCAGGTGGCAGC GTGGAGGCCCCCAGG   1080

       1081        1095 1096       1110 1111       1125 1126       1140 1141       1155 1156       1170
1 NOC2 ATGGGGTTCACCCAC CCGCCGGGCCACCTC TCTGGGTGCCAGAGC AGCCTGGCCAGTGGT GAGACGGG------- ---------------   847
2 NL1  ATGGGGTTCACCCAA CCCGCGGGCCACCTC TTTGGGTTGCAGAGC AGCCTGGCCAGTGGT GAGACGGGCACAGGC TCTGCTGACCCGCCA   897
3 LC1  ATGGGGTTCACCCAA CCCGCGGGCCACCTC TTTGGGTTGCAGAGC AGCCTGGCCAGTGGT GAGACGGGCACAGGC TCTGCTGACCCGCCA   [illegible]84
4 LC2  ATGGGGTTCACCCAA CCCGCGGGCCACCTC TTTGGGTTGCAGAGC AGCCTGGCCAGTGGT GAGACGGGCACAGGC TCTGCTGACCCGCCA   1050
5 LC3  ATGGGGTTCACCCAA CCCGCGGGCCACCTC TTTGGGTTGCAGAGC AGCCTGGCCAGTGGT GAGACGGGCACAGGC TCTGCTGACCCGCCA   1104
6 LC4  ATGGGGTTCACCCAA CCCGCGGGCCACCTC TTTGGGTTGCAGAGC AGCCTGGCCAGTGGT GAGACGGGCACAGGC TCTGCTGACCCGCCA   1170

       1171        1185 1186       1200 1201       1215 1216       1230 1231       1245 1246       1260
1 NOC2 --------GACAGGC TCTGCTGACCCGCCA GGGGGACCCCGCCCC GGGCTGACCCGAAGG GCCCCGGTAAAAGAC ACACCTGGACGAGCC   929
2 NL1  GGGGGAGGGACAGGC TCTGCTGACCCGCCA GGGGGACCCCGCCCC GGGCTGACCCGAAGG GCCCCGGTAAAAGAC ACACCTGGACGAGCC   987
3 LC1  GGGGGAGGGACAGGC TCTGCTGACCCGCCA GGGGGACCCCGCCCC GGGCTGACCCGAAGG GCCCCGGTAAAAGAC ACACCTGGACGAGCC   [illegible]4
4 LC2  GGGGGAGGGACAGGC TCTGCTGACCCGCCA GGGGGACCCCGCCCC GGGCTGACCCGAAGG GCCCCGGTAAAAGAC ACACCTGGACGAGCC   1140
5 LC3  GGGGGAGGGACAGGC TCTGCTGACCCGCCA GGGGGACCCCGCCCC GGGCTGACCCGAAGG GCCCCGGTAAAAGAC ACACCTGGACGAGCC   1194
6 LC4  GGGGGGGGGACAGGC TCTGCTGACCCGCCA GGGGGACCCCGCCCC GGGCTGACCCGAAGG GCCCCGGTAAAAGAC ACACCTGGACGAGCC   1260
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      1261        1275 1276       1290 1291       1305 1306       1320 1321       1335 1336       1350
1 NOC2 CCCGCTGCTGACGCA GCTCCAGCAGGCCCC TCCAGCTGCCTGGGC TGAGGTGTCTGGTGC CTGGAACAGACTTCC CTGTGGAGGATTCCT  1019
2 NL1  CCCGCTGCTGACGCA GCTCCAGCAGGCCCC TCCAGCTGCCTGGGC TGAGGTGTCTGGTGC CTGGAACAGACTTCC CTGTGGAGGATTCCT  1077
3 LC1  CCCGCTGCTGACGCA GCTCCAGCAGGCCCC TCCAGCTGCCTGGGC TGAGGTGTCTGGTGC CTGGAACAGACTTCC CTGTGGAGGATTCCT  1164
4 LC2  CCCGCTGCTGACGCA GCTCCAGCAGGCCCC TCCAGCTGCCTGGGC TGAGGTGTCTGGTGC CTGGAACAGACTTCC CTGTGGAGGATTCCT  1230
5 LC3  CCCGCTGCTGACGCA GCTCCAGCAGGCCCC TCCAGCTGCCTGGGC TGAGGTGTCTGGTGC CTGGAACAGACTTCC CTGTGGAGGATTCCT  [illegible]4
6 LC4  CCCGCTGCTGACGCA GCTCCAGCAGGCCCC TCCAGCTGCCTGGGC TGAGGTGTCTGGTGC CTGGAACAGACTTCC CTGTGGAGGATTCCT  1350

      1351        1365 1366       1380 1381       1395 1396       1410 1411       1425 1426       1440
1 NOC2 GCCAGACCCTGCCCG GCTCCTCCCTGACCG GTCCTTGTGCCCTCA CCAGACACCCTGTTG GCCATGACTCAACAA ACCAGTGTTGGGAGC  1109
2 NL1  GCCAGACCCTGCCCG GCTCCTCCCTGACCG GTCCTTGTGCCCTCA CCAGACACCCTGTTG GCCATGACTCAACAA ACCAGTGTTGGGAGC  1167
3 LC1  GCCAGACCCTGCCCG GCTCCTCCCTGACCG GTCCTTGTGCCCTCA CCAGACACCCTGTTG GCCATGACTCAACAA ACCAGTGTTGGGAGC  1254
4 LC2  GCCAGACCCTGCCCG GCTCCTCCCTGACCG GTCCTTGTGCCCTCA CCAGACACCCTGTTG GCCATGACTCAACAA ACCAGTGTTGGGAGC  1320
5 LC3  GCCAGACCCTGCCCG GCTCCTCCCTGACCG GTCCTTGTGCCCTCA CCAGACACCCTGTTG GCCATGACTCAACAA ACCAGTGTTGGGAGC  1374
6 LC4  GCCAGACCCTGCCCG GCTCCTCCCTGACCG GTCCTTGTGCCCTCA CCAGACACCCTGTTG GCCATGACTCAACAA ACCAGTGTTGGGAGC  [illegible]0

      1441        1455 1456       1470 1471       1485 1486       1500 1501       1515 1516       1530
1 NOC2 CGTCTGCCTCCCCAG CTCAGTGCCTTTCTG CACCCCTTCTCTCCT GGGGAGCTGTCTGCA TCCGCCACCCCCTCC AACCACTGCCCTCAG  1199
2 NL1  CGTCTGCCTCCCCAG CTCAGTGCCTTTCTG CACCCCTTCTCTCCT GGGGAGCTGTCTGCA TCCGCCACCCCCTCC AACCACTGCCCTCAG  1257
3 LC1  CGTCTGCCTCCCCAG CTCAGTGCCTTTCTG CACCCCTTCTCTCCT GGGGAGCTGTCTGCA TCCGCCACCCCCTCC AACCACTGCCCTCAG  1344
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4 LC2  CGTCTGCCTCCCCAG CTCAGTGCCTTTCTG CACCCCTTCTCTCCT GGGGAGCTGTCTGCA TCCGCCACCCCCTCC AACCACTGCCCTCAG   1410
5 LC3  CGTCTGCCTCCCCAG CTCAGTGCCTTTCTG CACCCCTTCTCTCCT GGGGAGCTGTCTGCA TCCGCCACCCCCTCC AACCACTGCCCTCAG   1464
6 LC4  CGTCTGCCTCCCCAG CTCAGTGCCTTTCTG CACCCCTTCTCTCCT GGGGAGCTGTCTGCA TCCGCCACCCCCTCC AACCACTGCCCTCAG   1530

       1531       1545 1546       1560 1561       1575 1576       1590 1591       1605 1606       1620
1 NOC2 CCCCCGACCTTATTT ATTACCCTCCCCTCC CACACCCCCAATCTA CCTGGTGATGATTTT AAGTTTGCGCGTGTC TTGGGTTGGGCTGGG   [redacted]9
2 NL1  CCCCCGACCTTATTT ATTACCCTCCCCTCC CACACCCCCAATCTA CCTGGTGATGATTTT AAGTTTGCGCGTGTC TTGGGTTGGGCTGGG   1347
3 LC1  CCCCCGACCTTATTT ATTACCCTCCCCTCC CACACCCCCAATCTA CCTGGTGATGATTTT AAGTTTGCGCGTGTC TTGGGTTGGGCTGGG   1434
4 LC2  CCCCCGACCTTATTT ATTACCCTCCCCTCC CACACCCCCAATCTA CCTGGTGATGATTTT AAGTTTGCGCGTGTC TTGGGTTGGGCTGGG   1500
5 LC3  CCCCCGACCTTATTT ATTACCCTCCCCTCC CACACCCCCAATCTA CCTGGTGATGATTTT AAGTTTGCGCGTGTC TTGGGTTGGGCTGGG   1554
6 LC4  CCCCCGACCTTATTT ATTACCCTCCCCTCC CACACCCCCAATCTA CCTGGTGATGATTTT AAGTTTGCGCGTGTC TTGGGTTGGGCTGGG   1620

       1621       1635 1636       1650 1651       1665 1666       1680 1681       1695 1696       1710
1 NOC2 GGGTTTCCCACATGC AGTGTCAGAGGGGCC GCCCGGTGGGGCTAT CTCCGTTGCTATATT AATGGCAAGACTAAA TGAAACCTAGGGCAC   1379
2 NL1  GGGTTTCCCACATGC AGTGTCAGAGGGGCC GCCCGGTGGGGCTAT CTCCGTTGCTATATT AATGGCAAGACTAAA TGAAACCTAGGGCAC   [redacted]37
3 LC1  GGGTTTCCCACATGC AGTGTCAGAGGGGCC GCCCGGTGGGGCTAT CTCCGTTGCTATATT AATGGCAAGACTAAA TGAAACCTAGGGCAC   1524
4 LC2  GGGTTTCCCACATGC AGTGTCAGAGGGGCC GCCCGGTGGGGCTAT CTCCGTTGCTATATT AATGGCAAGACTAAA TGAAACCTAGGGCAC   1590
5 LC3  GGGTTTCCCACATGC AGTGTCAGAGGGGCC GCCCGGTGGGGCTAT CTCCGTTGCTATATT AATGGCAAGACTAAA TGAAACCTAGGGCAC   1644
6 LC4  GGGTTTCCCACATGC AGTGTCAGAGGGGCC GCCCGGTGGGGCTAT CTCCGTTGCTATATT AATGGCAAGACTAAA TGAAACCTAGGGCAC   1710
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                1711        1725 1726       1740 1741       1755 1756       1770 1771       1785 1786       1800
1 NOC2 GGCCTCCGAAGCTGC GTGTGGCCCCTTAGA GGTGAGCATCAGAGC CAGAGCAGTGAGGGG GAGACTCACCCACCC TCTCCCTCTCCCTTC  1469
2 NL1  GGCCTCCGAAGCTGC GTGTGGCCCCTTAGA GGTGAGCATCAGAGC CAGAGCAGTGAGGGG GAGACTCACCCACCC TCTCCCTCTCCCTTC  1527
3 LC1  GGCCTCCGAAGCTGC GTGTGGCCCCTTAGA GGTGAGCATCAGAGC CAGAGCAGTGAGGGG GAGACTCACCCACCC TCTCCCTCTCCCTTC  1614
4 LC2  GGCCTCCGAAGCTGC GTGTGGCCCCTTAGA GGTGAGCATCAGAGC CAGAGCAGTGAGGGG GAGACTCACCCACCC TCTCCCTCTCCCTTC  1680
5 LC3  GGCCTCCGAAGCTGC GTGTGGCCCCTTAGA GGTGAGCATCAGAGC CAGAGCAGTGAGGGG GAGACTCACCCACCC TCTCCCTCTCCCTTC  1754
6 LC4  GGCCTCCGAAGCTGC GTGTGGCCCCTTAGA GGTGAGCATCAGAGC CAGAGCAGTGAGGGG GAGACTCACCCACCC TCTCCCTCTCCCTTC  1800

                1801        1815 1816       1830 1831       1845 1846       1860 1861       1875 1876       1890
1 NOC2 AGCTCTGGGAGGCAG GCGCAGTGCCCCCCT CCCATGGGCTGGCCC AGGACCGCGGGTGAA ACCTGGGTCTGTTTA GTTTCTTTGGTTTTT  1559
2 NL1  AGCTCTGGGAGGCAG GCGCAGTGCCCCCCT CCCATGGGCTGGCCC AGGACCGCGGGTGAA ACCTGGGTCTGTTTA GTTTCTTTGGTTTTT  1617
3 LC1  AGCTCTGGGAGGCAG GCGCAGTGCCCCCCT CCCATGGGCTGGCCC AGGACCGCGGGTGAA ACCTGGGTCTGTTTA GTTTCTTTGGTTTTT  1704
4 LC2  AGCTCTGGGAGGCAG GCGCAGTGCCCCCCT CCCATGGGCTGGCCC AGGACCGCGGGTGAA ACCTGGGTCTGTTTA GTTTCTTTGGTTTTT  1770
5 LC3  AGCTCTGGGAGGCAG GCGCAGTGCCCCCCT CCCATGGGCTGGCCC AGGACCGCGGGTGAA ACCTGGGTCTGTTTA GTTTCTTTGGTTTTT  1844
6 LC4  AGCTCTGGGAGGCAG GCGCAGTGCCCCCCT CCCATGGGCTGGCCC AGGACCGCGGGTGAA ACCTGGGTCTGTTTA GTTTCTTTGGTTTTT  1890
                1891        1905 1906       1920 1921       1935 1936       1950 1951       1965 1966       1980
1 NOC2 GTATGTTTGTTTGTT TTTGACACAGTCTCG CTTTGTTGCCCAGGC TGGGGTGCAGTGGCA CGATCGCGGCTCACT GCAACCTCCACCTCC  1649
2 NL1  GTATGTTTGTTTGTT TTTGACACAGTCTCG CTTTGTTGCCCAGGC TGGGGTGCAGTGGCA CGATCGCGGCTCACT GCAACCTCCACCTCC  1707
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3	LC1	GTATGTTTGTTTGTT	TTTGACACAGTCTCG	CTTTGTTGCCCAGGC	TGGGGTGCAGTGGCA	CGATCGCGGCTCACT	GCAACCTCCACCTCC	1794
4	LC2	GTATGTTTGTTTGTT	TTTGACACAGTCTCG	CTTTGTTGCCCAGGC	TGGGGTGCAGTGGCA	CGATCGCGGCTCACT	GCAACCTCCACCTCC	1860
5	LC3	GTATGTTTGTTTGTT	TTTGACACAGTCTCG	CTTTGTTGCCCAGGC	TGGGGTGCAGTGGCA	CGATCGCGGCTCACT	GCAACCTCCACCTCC	1914
6	LC4	GTATGTTTGTTTGTT	TTTGACACAGTCTCG	CTTTGTTGCCCAGGC	TGGGGTGCAGTGGCA	CGATCGCGGCTCACT	GCAACCTCCACCTCC	1980

		1981 1995	1996 2010	2011 2025	2026 2040	2041 2055	2056 2070	
1	NOC2	CGGGCTCAAGCGATT	CTCTCACCTCAGCCT	CCTGAGTAGGTGGGA	TTACAGATGCCCGCC	ACCACACCCAGTTAA	TTTTTGTATTTTTAG	1739
2	NL1	CGGGCTCAAGCGATT	CTCTCACCTCAGCCT	CCTGAGTAGGTGGGA	TTACAGATGCCCGCC	ACCACACCCAGTTAA	TTTTTGTATTTTTAG	1797
3	LC1	CGGGCTCAAGCGATT	CTCTCACCTCAGCCT	CCTGAGTAGGTGGGA	TTACAGATGCCCGCC	ACCACACCCAGTTAA	TTTTTGTATTTTTAG	1884
4	LC2	CGGGCTCAAGCGATT	CTCTCACCTCAGCCT	CCTGAGTAGGTGGGA	TTACAGATGCCCGCC	ACCACACCCAGTTAA	TTTTTGTATTTTTAG	1950
5	LC3	CGGGCTCAAGCGATT	CTCTCACCTCAGCCT	CCTGAGTAGGTGGGA	TTACAGATGCCCGCC	ACCACACCCAGTTAA	TTTTTGTATTTTTAG	2004
6	LC4	CGGGCTCAAGCGATT	CTCTCACCTCAGCCT	CCTGAGTAGGTGGGA	TTACAGATGCCCGCC	ACCACACCCAGTTAA	TTTTTGTATTTTTAG	2070

		2071 2085	2086 2100	2101 2115	2116 2130	2131 2145	2146 2160	
1	NOC2	AAGAGATGGGGTTTC	TCCATGTTGGCCAGG	CTGGTCTTGAACTCC	TGGTCTCAAGTGATC	CGCCCGCCTCGGCCT	CCCAAAGTGCTGGGA	1829
2	NL1	AAGAGATGGGGTTTC	TCCATGTTGGCCAGG	CTGGTCTTGAACTCC	TGGTCTCAAGTGATC	CGCCCGCCTCGGCCT	CCCAAAGTGCTGGGA	1887
3	LC1	AAGAGATGGGGTTTC	TCCATGTTGGCCAGG	CTGGTCTTGAACTCC	TGGTCTCAAGTGATC	CGCCCGCCTCGGCCT	CCCAAAGTGCTGGGA	1974
4	LC2	AAGAGATGGGGTTTC	TCCATGTTGGCCAGG	CTGGTCTTGAACTCC	TGGTCTCAAGTGATC	CGCCCGCCTCGGCCT	CCCAAAGTGCTGGGA	2040

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5 LC3  AAGAGATGGGGTTTC TCCATGTTGGCCAGG CTGGTCTTGAACTCC TGGTCTCAAGTGATC CGCCCGCCTCGGCCT CCCAAAGTGCTGGGA   2094
6 LC4  AAGAGATGGGGTTTC TCCATGTTGGCCAGG CTGGTCTTGAACTCC TGGTCTCAAGTGATC CGCCCGCCTCGGCCT CCCAAAGTGCTGGGA   2160

       2161        2175 2176       2190 2191       2205 2206       2220 2221       2235 2236       2250
1 NOC2 TTACAGGTGTGAGCC ACCGCACCCAATCCT ATTAGGTTTCTTTGA ATCCCCTCATGGCCT GCCTGGTTTTTGCTC AGCCTGTCTTCAGCT   1919
2 NL1  TTACAGGTGTGAGCC ACCGCACCCAATCCT ATTAGGTTTCTTTGA ATCCCCTCATGGCCT GCCTGGTTTTTGCTC AGCCTGTCTTCAGCT   1977
3 LC1  TTACAGGTGTGAGCC ACCGCACCCAATCCT ATTAGGTTTCTTTGA ATCCCCTCATGGCCT GCCTGGTTTTTGCTC AGCCTGTCTTCAGCT   [redacted]4
4 LC2  TTACAGGTGTGAGCC ACCGCACCCAATCCT ATTAGGTTTCTTTGA ATCCCCTCATGGCCT GCCTGGTTTTTGCTC AGCCTGTCTTCAGCT   2130
5 LC3  TTACAGGTGTGAGCC ACCGCACCCAATCCT ATTAGGTTTCTTTGA ATCCCCTCATGGCCT GCCTGGTTTTTGCTC AGCCTGTCTTCAGCT   2184
6 LC4  TTACAGGTGTGAGCC ACCGCACCCAATCCT ATTAGGTTTCTTTGA ATCCCCTCATGGCCT GCCTGGTTTTTGCTC AGCCTGTCTTCAGCT   2250

       2251        2265 2266       2280 2281       2295 2296       2310 2311       2325 2326       2340
1 NOC2 TGAGGAGCTGGGAAG CTCTGGTGGATGCTA TGAACTCACTTGCTG AAGAGCAGCGTTCAG GTGCATCCCCAGCCA GGGCACGTGGCTCCC   2009
2 NL1  TGAGGAGCTGGGAAG CTCTGGTGGATGCTA TGAACTCACTTGCTG AAGAGCAGCGTTCAG GTGCATCCCCAGCCA GGGCACGTGGCTCCC   2067
3 LC1  TGAGGAGCTGGGAAG CTCTGGTGGATGCTA TGAACTCACTTGCTG AAGAGCAGCGTTCAG GTGCATCCCCAGCCA GGGCACGTGGCTCCC   [redacted]4
4 LC2  TGAGGAGCTGGGAAG CTCTGGTGGATGCTA TGAACTCACTTGCTG AAGAGCAGCGTTCAG GTGCATCCCCAGCCA GGGCACGTGGCTCCC   2220
5 LC3  TGAGGAGCTGGGAAG CTCTGGTGGATGCTA TGAACTCACTTGCTG AAGAGCAGCGTTCAG GTGCATCCCCAGCCA GGGCACGTGGCTCCC   2274
6 LC4  TGAGGAGCTGGGAAG CTCTGGTGGATGCTA TGAACTCACTTGCTG AAGAGCAGCGTTCAG GTGCATCCCCAGCCA GGGCACGTGGCTCCC   2340
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      2341        2355 2356       2370 2371       2385 2386       2400 2401       2415 2416       2430
1 NOC2 TCAGCCATGAATTCA CTTCTCTTCAGGAGG TTTGGCTTGGCATGA AAATACTTCATTCAG AGTATGGGCAAATGC TTCTGGAAAACCCTT  2099
2 NL1  TCAGCCATGAATTCA CTTCTCTTCAGGAGG TTTGGCTTGGCATGA AAATACTTCATTCAG AGTATGGGCAAATGC TTCTGGAAAACCCTT  2157
3 LC1  TCAGCCATGAATTCA CTTCTCTTCAGGAGG TTTGGCTTGGCATGA AAATACTTCATTCAG AGTATGGGCAAATGC TTCTGGAAAACCCTT  2244
4 LC2  TCAGCCATGAATTCA CTTCTCTTCAGGAGG TTTGGCTTGGCATGA AAATACTTCATTCAG AGTATGGGCAAATGC TTCTGGAAAACCCTT  [redacted]0
5 LC3  TCAGCCATGAATTCA CTTCTCTTCAGGAGG TTTGGCTTGGCATGA AAATACTTCATTCAG AGTATGGGCAAATGC TTCTGGAAAACCCTT  2364
6 LC4  TCAGCCATGAATTCA CTTCTCTTCAGGAGG TTTGGCTTGGCATGA AAATACTTCATTCAG AGTATGGGCAAATGC TTCTGGAAAACCCTT  2430
      2431        2445 2446       2460 2461       2475 2476       2490 2491       2505 2506       2520
1 NOC2 CCCTGAAGAGAGAGA ACGTGTGTGTGTGTG TCGGTGATCACACCC TCCCATCCTTCCTGC CTCCTGCCCCAAACC CCGGGTTCCTGGGTC  2189
2 NL1  CCCTGAAGAGAGAGA ACGTGTGTGTGTGTG TCGGTGATCACACCC TCCCATCCTTCCTGC CTCCTGCCCCAAACC CCGGGTTCCTGGGTC  2247
3 LC1  CCCTGAAGAGAGAGA ACGTGTGTGTGTGTG TCGGTGATCACACCC TCCCATCCTTCCTGC CTCCTGCCCCAAACC CCGGGTTCCTGGGTC  2334
4 LC2  CCCTGAAGAGAGAGA ACGTGTGTGTGTGTG TCGGTGATCACACCC TCCCATCCTTCCTGC CTCCTGCCCCAAACC CCGGGTTCCTGGGTC  2400
5 LC3  CCCTGAAGAGAGAGA ACGTGTGTGTGTGTG TCGGTGATCACACCC TCCCATCCTTCCTGC CTCCTGCCCCAAACC CCGGGTTCCTGGGTC  2454
6 LC4  CCCTGAAGAGAGAGA ACGTGTGTGTGTGTG TCGGTGATCACACCC TCCCATCCTTCCTGC CTCCTGCCCCAAACC CCGGGTTCCTGGGTC  [redacted]0
      2521        2535 2536       2550 2551       2565 2566       2580 2581       2595 2596       2610
1 NOC2 TGGAAGGGCCTTCTC TCCAAGCTGGGAGCT CCTGGGCCCCCACCA TTCACTTTTTGTCCT TGCTGCTGGCAAACA GTAAAGAAACTCACT  2279
2 NL1  TGGAAGGGCCTTCTC TCCAAGCTGGGAGCT CCTGGGCCCCCACCA TTCACTTTTTGTCCT TGCTGCTGGCAAACA GTAAAGAAACTCACT  2337
```

```
3 LC1  TGGAAGGGCCTTCTC TCCAAGCTGGGAGCT CCTGGGCCCCCACCA TTCACTTTTTGTCCT TGCTGCTGGCAAACA GTAAAGAAACTCACT   2424
4 LC2  TGGAAGGGCCTTCTC TCCAAGCTGGGAGCT CCTGGGCCCCCACCA TTCACTTTTTGTCCT TGCTGCTGGCAAACA GTAAAGAAACTCACT   2490
5 LC3  TGGAAGGGCCTTCTC TCCAAGCTGGGAGCT CCTGGGCCCCCACCA TTCACTTTTTGTCCT TGCTGCTGGCAAACA GTAAAGAAACTCACT   2544
6 LC4  TGGAAGGGCCTTCTC TCCAAGCTGGGAGCT CCTGGGCCCCCACCA TTCACTTTTTGTCCT TGCTGCTGGCAAACA GTAAAGAAACTCACT   2610
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       2611        2625 2626       2640 2641       2655 2656
1 NOC2 TTCCCTGTGGCACGT TATGCTTCAGAATTA AAACAATGAAGATTA AAA  2327
2 NL1  TTCCCTGTGGCACGT TATGCTTCAGAATTA AAACAATGAAGATTA AAA  2385
3 LC1  TTCCCTGTGGCACGT TATGCTTCAGAATTA AAACAATGAAGATTA AAA  2472
4 LC2  TTCCCTGTGGCACGT TATGCTTCAGAATTA AAACAATGAAGATTA AAA  2538
5 LC3  TTCCCTGTGGCACGT TATGCTTCAGAATTA AAACAATGAAGATTA AAA  2592
6 LC4  TTCCCTGTGGCACGT TATGCTTCAGAATTA AAACAATGAAGATTA AAA  2658
```


Fig. 7

```
       1            15 16          30 31          45 46          60 61          75 76          90
1 NOC2 MADTIFGSGNDQWVC PNDRQLALRAKLQTG WSVHTYQTEKQRRKQ HLSPAEVEAILQVIQ RAERLDVLEQQRIGR LVERLETMRRNVMGN  90
2 NL1  MADTIFGSGNDQWVC PNDRQLALRAKLQTG WSVHTYQTEKQRRKQ HLSPAEVEAILQVIQ RAERLDVLEQQRIGR LVERLETMRRNVMGN  90
3 LC1  MADTIFGSGNDQWVC PNDRQLALRAKLQTG WSVHTYQTEKQRRKQ HLSPAEVEAILQVIQ RAERLDVLEQQRIGR LVERLETMRRNVMGN  90
```

```
4 LC2  ---------- ---------- ---------- ---------- ---------- -------MRRNVMGN      8
5 LC3  MADTIFGSGNDQWVC PNDRQLALRAKLQTG WSVHTYQTEKQRRKQ HLSPAEVEAILQVIQ RAERLDVLEQQRIGR LVERLETMRRNVMGN     90
6 LC4  ---------- ---------- ---------- ---------- ---------- -------MRRNVMGN      8

       91         105 106        120 121        135 136        150 151        165 166        180
1 NOC2 GLSQCLLCGEVLGFL GSSSVFCKDCRKKVC TKCGIEASPGQKRPL WLCKICSEQREVWKR SGAWFYKGLPKYILP LKTPGRADDPHFRPL    180
2 NL1  GLSQCLLCGEVLGFL GSSSVFCKDCRK--- ---------- ----------VWKR SGAWFYKGLPKYILP LKTPGRADEPQFRPW    151
3 LC1  GLSQCLLCGEVLGFL GSSSVFCKDCRKKVC TKCGIEASPGQKRPL WLCKICSEQREVWKR SGAWFYKGLPKYILP LKTPGRADDPHFRPL    180
4 LC2  GLSQCLLCGEVLGFL GSSSVFCKDCRKKVC TKCGIEASPGQKRPL WLCKICSEQREVWKR SGAWFYKGLPKYILP LKTPGRADDPHFRPL     98
5 LC3  GLSQCLLCGEVLGFL GSSSVFCKDCRKKVC TKCGIEASPGQKRPL WLCKICSEQREVWKR SGAWFYKGLPKYILP LKTPGRADDPHFRPL    180
6 LC4  GLSQCLLCGEVLGFL GSSSVFCKDCRKKVC TKCGIEASPGQKRPL WLCKICSEQREVWKR SGAWFYKGLPKYILP LKTPGRADDPHFRPL     98

       181        195 196        210 211        225 226        240 241        255 256        270
1 NOC2 PTEPAEREPRSSETS RIYTWARGRVVSSDS DSDSDLSSSSLEDRL PSTGVRDRKGDKPWK ESGGSVEAPRMGFTH PPGHLSGCQSSLASG    270
2 NL1  PTEPAEREPRSSETS RIYTWARGRVVSSDS DSDSDLSSSSLEDRL PSTGVRDRKGDKPWK ESGGSVEAPRMGFTQ PAGHLFGLQSSLASG    241
3 LC1  PTEPAEREPRSSETS RIYTWARGRVVSSDS DSDSDLSSSSLEDRL PSTGVRDRKGDKPWK ESGGSVEAPRMGFTQ PAGHLFGLQSSLASG    270
4 LC3  PTEPAEREPRSSETS RIYTWARGRVVGRKC ---------- ---------- ---------- ----------    210
5 LC4  PTEPAEREPRSSETS RIYTWARGRVVGRKC ---------- ---------- ---------- ----------    128
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6 LC2 PTEPAEREPRSSETS RIYTWARGRVVSSDS DSDSDLSSSSLEDRL PSTGVRDRKGDKPWK ESGGSVEAPRMGFTQ PAGHLFGLQSSLASG 188

		271	285	286	300	301	315	316	330	
1	NOC2	ETGTGSADPPGG---	-------	PRPGLTRR	APVKDTPGRAPAADA	APAGPSSCLG				315
2	NL1	ETGTGSADPPGGGTG	SADPPGGPRPGLTRR		APVKDTPGRAPAADA	APAGPSSCLG				296
3	LC1	ETGTGSADPPGGGTG	SADPPGGPRPGLTRR		APVKDTPGRAPAADA	APAGPSSCLG				325
4	LC2	ETGTGSADPPGGGTG	SADPPGGPRPGLTRR		APVKDTPGRAPAADA	APAGPSSCLG				243
5	LC3	----------	----------		----------		----------		----------	210
6	LC4	----------	----------		----------		----------		----------	128